

EXHIBIT 1

EXCLUSIVE LICENSE AGREEMENT

AGREEMENT, dated December 30, 2016 (the “Effective Date”), between THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK, a New York corporation (“Columbia”), and Caelum Biosciences, Inc., a Delaware corporation (“Company”).

1. Definitions.

a. “Affiliate” shall mean any corporation or other entity that directly or indirectly controls, is controlled by, or is under common control with, another corporation or entity. Control means to possess, directly or indirectly, the power to affirmatively direct the management and policies of such corporation or other entity, whether through direct or indirect ownership of, or other beneficial interest in, fifty percent (50%) or more of the voting stock, other voting interest, or income of a corporation or other entity.

b. “BLA” shall mean a biological license application submitted to a Regulatory Authority seeking regulatory approval to introduce, or deliver for introduction, a biologic product into interstate commerce (or an equivalent filing in a jurisdiction outside of the United States).

c. “Challenge” shall mean a challenge to the validity, patentability, enforceability and/or non-infringement of any of the Patents or otherwise opposing any of the Patents in any court, administrative agency, or other forum, but does not include any arguments and comments made by or on behalf of Company or any Sublicensee in its usual course of business with respect to prosecution of Company’s or any Sublicensees’ patents or patent applications in response to office actions and other communications from patent offices, agencies, or authorities, provided that such arguments or comments are not intended to directly challenge the validity, patentability, enforceability and/or non-infringement of any of the Patents and do not result in an interference being declared.

d. “Combination Product” shall mean any product comprising a combination of (i) a Product and (ii) and one or more additional therapeutically active ingredients (which may be co-packaged but not co-formulated) which are not Products but which may each or collectively form the basis for a separately saleable product (“Independent Subproduct”). Pharmaceutical dosage form vehicles, adjuvants, and excipients shall not be deemed to be “therapeutically active ingredients”, except in the case where such vehicle, adjuvant, or excipient is recognized by the FDA as an active ingredient in accordance with 21 CFR 210.3(b)(7).

e. “Cover” or “Covered By” shall mean (i) infringes, in the case of a Valid Claim of a Patent, or (ii) would infringe the Valid Claim if it existed in an issued patent, in the case of a claim in a pending patent application.

f. “Designee” shall mean a corporation or other entity that is employed by, under contract to, or in partnership with (i) Company, (ii) a Sublicensee, (iii) an Affiliate of Company or (iv) an Affiliate of a Sublicensee, wherein such corporation or other entity is granted the right to make, use, sell, promote, distribute, market, import, or export Products. For

the sake of clarity, an entity distributing Products employed by, under contract to or in partnership with Company, Sublicensee or an Affiliate of Company or Sublicensee is a Designee.

g. “Field” shall mean prevention, treatment, diagnosis, detection, monitoring, and predisposition testing of all diseases, states or conditions in humans.

h. “First Commercial Sale” shall mean, with respect to a Product in any country, the first sale, transfer or disposition by Licensee, an Affiliate or Designee of Company or Sublicensee for value for end use or consumption of such Product in such country after marketing approval has been received in such country provided, that any sale, transfer or disposition (i) to a Sublicensee or an Affiliate or Designee of Company will not constitute a First Commercial Sale, (ii) of samples with respect to a Product will not constitute a First Commercial Sale, and (iii) for use in a clinical trial or for compassionate use will not constitute a First Commercial Sale.

i. “License Year” shall mean the one-year period from the Effective Date of this Agreement or an anniversary thereof to the next anniversary of the Effective Date.

j. “Materials” shall mean the chimeric fibril-reactive monoclonal antibody 11-1F4 and clones used to produce the chimeric fibril-reactive monoclonal antibody 11-1F4 as described on Exhibit B that are actually delivered to Company pursuant to this Agreement and any modifications and derivatives thereof created by the Company, its Affiliates, Sublicensees or Designees.

k. “NDA” shall mean a new drug application (as defined in Title 21 of the CFR, as amended from time to time) submitted to a Regulatory Authority seeking regulatory approval to market and sell the Product for human therapeutic use in the United States (including a new drug application submitted under Section 505(b)(2) of the Federal Food, Drug, and Cosmetic Act) (or an equivalent filing in a jurisdiction outside of the United States).

l. “Net Sales” shall mean the greater of (a) the gross invoice or contract price received from Third Party customers or Designees for Company’s and Sublicensees’ and any Affiliates of the foregoing for sales of Products or (b) the actual consideration paid by Third Party customers to the Company, its Sublicensees or any Affiliates or Designees for Products (provided, however, in the case of the foregoing clause (b), Net Sales may only be calculated on the basis of a sale of Products by a Designee to a Third Party if Company or Sublicensee or any Affiliate of the foregoing receives a royalty on any portion of such sale), less the sum of the following, to the extent related to the sale of such Products: (i) discounts in amounts reasonable or customary in the trade, which is limited to trade, cash, consumer, and quantity discounts, and credits, price adjustments or allowances for damaged Products, returns, defects, recalls or rejections of Products or retroactive price reductions; (ii) reasonable rebates, credits, and chargeback payments granted to federal, state/provincial, local and other governments or managed health care organizations, including their agencies, purchasers, and/or reimbursers, under programs available under or required by applicable laws, rules or regulations; (iii) to the extent separately stated on purchase order, invoices or other documents of sales, any taxes or other governmental charges levied on the production, sale, rental, lease or transfer, transportation, delivery, performance or use of a Product which is paid by or on behalf of

Company, Sublicensees, Designees or any Affiliate of the foregoing; (iv) amounts allowed or credited on returns for defective, damaged, expired, or otherwise unusable or unsaleable Products; (v) freight, shipping, handling, and insurance charges incurred in the transit of any Product and actually paid by Company, Sublicensees, Designees and any Affiliate of the foregoing; (vi) import or export duties, tariffs, or similar charges incurred with respect to the import or export of Products into or out of any country and actually paid by Company, Sublicensees, Designees and any Affiliate of the foregoing; (vii) uncollectible amounts. Such amounts shall be determined from the books and records of Company and Sublicensees and any Affiliates of the foregoing maintained in accordance with such reasonable accounting principles as may be consistently applied by Company and Sublicensees and the Affiliates of the foregoing.

Products are considered “sold” when billed out or invoiced.

Notwithstanding the foregoing, Net Sales shall not include, and shall be deemed zero with respect to: (i) Products used by Company, its Affiliates, or Sublicensees for their internal use, (ii) the distribution of promotional samples of Products provided free of charge, or (iii) Products provided for clinical trials or research, development, or evaluation purposes.

In the case of transfers of Products between any of Company, Sublicensees, Designees, and Affiliates of any of the foregoing, for subsequent sale, rental, lease or other transfer of such Products to Third Parties, Net Sales shall be the greater of (x) the actual amount charged for the transfer of the Product between any of Company, Sublicensees, and any Designee or Affiliate of any of the foregoing and (y) if Company or Sublicensee or any Affiliate of the foregoing receives a royalty or any portion of the sale, rental, lease or other transfer of such Products to Third Parties, the gross invoice or contract price charged to the Third Party customer for that Product in an arm’s-length transaction.

In the event that a Product is sold as a Combination Product, Net Sales, for the purposes of determining royalty payments of the Combination Product, shall mean, on a country-by-country basis, the gross amount collected for the Combination Product less the deductions set forth in clauses (i) through (vii) above, multiplied by a proration factor that is determined as follows:

- (1) If all components of the Combination Product were sold separately during the same or immediately preceding calendar quarter, the proration factor shall be determined by the formula $[A/(A+B)]$, where A is the average gross sales price in such country of all Product components during such period when sold separately from the other component(s), and B is the average gross sales price in such country of the other component(s) during such period when sold separately from Product components; and
- (2) If all components of the Combination Product were not sold separately during the same or immediately preceding calendar quarter, the proration factor shall be determined by the parties in good faith negotiations based on the relative value contributed by each component.

m. “New Clinical Trial” means the administration of the first dose of a Product to the first subject in any clinical trial that is, in the reasonable discretion of Columbia, intended to support an NDA for a Product, which clinical trial is not existence as of, and is begun subsequent to, the Effective Date.

n. “Other Product” shall mean any product or service (or component

thereof), other than a Patent Product, the discovery, development, manufacture, use, sale, offering for sale, importation, exportation, distribution, rental or lease of which involves the use of or incorporation, in whole or in part, of Materials or Technical Information.

o. “Patent” or “Patents” shall mean: (i) the United States and foreign patents and/or patent applications listed in Exhibit A hereto; (ii) any non-provisional patent applications that claim priority to any provisional patent applications listed in Exhibit A hereto; (iii) any and all claims of continuation-in-part applications that claim priority to the United States patent applications listed in Exhibit A, but only where such claims are directed to inventions disclosed in the manner provided in the first paragraph of 35 U.S.C. Section 112 in the United States patent applications listed in Exhibit A, and such claims in any patents issuing from such continuation-in-part applications; (iv) any and all foreign patent applications, foreign patents or related foreign patent documents that claim priority to the patents and/or patent applications listed in Exhibit A; (v) any and all divisionals, continuations, reissues, re-examinations, renewals, substitutions, and extensions of the foregoing; (vi) any patent applications filed by Columbia or by outside patent counsel on behalf of Columbia that discloses or claims subject matter contained in that certain report entitled “Revised Milestone 2: Report on the Construction, COS Cell Expression, and Preliminary Binding Analysis of the Chimeric Mouse-Human 11-1F4 Antibody, Expressed in COS Cells using the Light and Heavy Chain Expression Vectors pKN100 and pGID200 Respectively” by Aeres Biomedical Limited; and (vii) any and all patents issuing from the foregoing. Notwithstanding the preceding definition, Patent and Patents shall not include any patents or patent applications based on research conducted after the Effective Date, except as otherwise agreed in a separate writing.

p. “Patent Product” shall mean any product or service (or component thereof) the discovery, development, manufacture, use, sale, offering for sale, importation, exportation, distribution, rental or lease of which is Covered By a Valid Claim of a Patent.

q. “Product” or “Products” shall mean a Patent Product and/or an Other Product.

r. “Regulatory Authority” means the U.S. Food and Drug Administration or its counterpart anywhere in the Territory.

s. “Regulatory Exclusivity” means any exclusive marketing rights or data exclusivity rights conferred by any Regulatory Authority with respect to a Product other than Patents, including, without limitation, rights conferred in the United States under the Hatch-Waxman Act or the FDA Modernization Act of 1997 (including pediatric exclusivity), or rights similar thereto outside the United States.

t. “Sublicensee” shall mean any third party to whom Company has granted a sublicense pursuant to this Agreement. An Affiliate or Designee of Company exercising rights hereunder shall not be considered a Sublicensee.

u. “Sublicensing Revenue” means any consideration actually received by Company from a Sublicensee as consideration for the sublicense of rights granted to the Company under this Agreement. Sublicensing Revenue includes, but is not limited to, upfront fees, license maintenance fees, and milestone payments, or other payments, including the fair market value of any non-cash consideration actually received by Company from a third party as consideration for

the grant of rights to the Patents, and excludes (A) sales-based royalties, (B) fair market purchases of equity or debt of Company or any Affiliate, (C) fair market value payments made in connection with research and development agreements, joint ventures, partnerships or collaboration agreements where Company or an Affiliate is obligated to perform research and development of any Product(s), and (D) other payments made by a Sublicensee as consideration for Company's or an Affiliate's performance of services or provision of goods that are not Products.

v. "Technical Information" shall mean any know-how, technical information and data developed by Columbia by or under the direction of Dr. Suzanne Lentzsch prior to the Effective Date or any know-how, technical information and data under the control of Columbia and provided to or received by Company, which know-how, technical information and data are necessary or useful for the discovery, development, manufacture, use, sale, offering for sale, importation, exportation, distribution, rental or lease of a Product, including, without limitation, (i) any know-how, technical information and data disclosed in any Patent or (ii) any reports or disclosures concerning research or inventions provided or disclosed to, or otherwise received by, Company. Technical Information shall include, but is not limited to, the information set forth in Exhibit B hereto.

w. "Territory" shall mean worldwide.

x. "Third Party" shall mean any entity or person other than Company, Sublicensees, Designees, or their Affiliates.

y. "Valid Claim" shall mean a claim of any pending patent application or any issued, unexpired United States or granted foreign patent that has not been dedicated to the public, disclaimed, abandoned or held invalid or unenforceable by a court or other body of competent jurisdiction from which no further appeal can be taken, and that has not been explicitly disclaimed, or admitted in writing to be invalid or unenforceable or of a scope not covering a particular product or service through reissue, disclaimer or otherwise, provided that if a particular claim has not issued within seven (7) years of its initial filing, it shall not be considered a Valid Claim for purposes of this Agreement unless and until such claim is included in an issued or granted Patent, notwithstanding the foregoing definition.

2. License Grant.

a. Columbia hereby grants to the Company, and any Affiliate or Designee thereof, upon and subject to all the terms and conditions of this Agreement (including Section 3 hereof):

(i) an exclusive license under the Patents to discover, develop, have developed, manufacture, have manufactured, make, have made, use, have used, sell, offer to sell, have sold, import, have imported, export, distribute, rent or lease Products in the Field and throughout the Territory;

(ii) an exclusive license to use Technical Information to discover, develop, have developed, manufacture, have manufactured, make, have made, use, have used, sell, offer to sell, have sold, import, have imported, export, distribute, rent or lease Products in the Field and throughout the Territory provided that upon an item of Technical Information becoming

publically available, the license to such item of Technical Information shall automatically convert to a non-exclusive license, provided that Columbia has the right to utilize, publish or disclose its Technical Information; and

(iii) an exclusive license to use Materials to discover, develop, manufacture, have made, use, sell, offer to sell, have sold, import, export, distribute, rent or lease Products in the Field and throughout the Territory.

b. Columbia hereby grants to Company the right to grant sublicenses in whole or in part under the rights granted to it pursuant to Section 2a, provided that: (i) the Sublicensee agrees to abide by and be subject to all the terms and provisions of this Agreement applicable to the Sublicensee's exercise of the rights under its sublicense (excluding, without limitation, the payment obligations set forth herein); (ii) in the event any Sublicensee (or any entity or person acting on its behalf) initiates any Challenge, Company shall, upon written request by Columbia, terminate forthwith the sublicense agreement with such Sublicensee unless such Sublicensee terminates or withdraws such Challenge within thirty (30) days of receipt of notice of termination from Company, and the sublicense agreement shall provide for such right of termination by Company; (iii) the sublicense agreement shall provide that, in the event of any inconsistency between the sublicense agreement and this Agreement, this Agreement shall control; (v) the Sublicensee will submit quarterly reports to Company consistent with the reporting provision of Section 5a herein; (vi) Company remains fully liable for the performance of its obligations hereunder; (vii) Company notifies Columbia of any proposed grant of a sublicense and provides to Columbia, upon request, a copy of any proposed sublicense agreement thirty (30) business days following the execution thereof; and (viii) no such sublicense or attempt to obtain a sublicense shall relieve Company of its obligations under Section 6 hereof to exercise its own commercially reasonable efforts, directly or through a sublicense, to discover, develop and market Products, nor relieve Company of its obligations to pay Columbia any and all license fees, royalties and other payments due under the Agreement, including but not limited to under Sections 4, 5 and 11 of the Agreement. Each first Sublicensee to whom Company directly grants a sublicense with respect to certain or all of the rights granted hereunder shall have the right to grant sublicenses under its sublicense from the Company (each, a "Second Tier Sublicense") provided that in each case, the Second Tier Sublicense is in compliance with the provisions of this Section 2b as if it were an initial sublicense granted directly from the Company.

c. All rights and licenses granted by Columbia to Company under this Agreement are subject to applicable requirements of 35 U.S.C. Sections 200 et seq., as amended, and implementing regulations and policies. Company agrees that, to the extent required under 35 U.S.C. Section 204, any Product used, sold, distributed, rented or leased by Company, Sublicensees, Designees, and their Affiliates in the United States will be manufactured substantially in the United States. In addition, Company agrees that, to the extent required under 35 U.S.C. Section 202(c)(4), the United States government is granted a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States any Patent throughout the world.

d. All rights not specifically granted herein are reserved to Columbia. Except as expressly provided under this Section 2, no right or license is granted (expressly or by implication or estoppel) by Columbia to Company or its Affiliates, Designees or Sublicensees

under any tangible or intellectual property, materials, patent, patent application, trademark, copyright, trade secret, know-how, technical information, data or other proprietary right.

e. Company, its Affiliates, Designees and Sublicensees and Columbia shall take into consideration the principle of “Global Social Responsibility” in connection with the actions to be undertaken under this Agreement. “Global Social Responsibility” means facilitating the availability of Products in Developing Countries (i.e., The World Bank’s listing of “Low Income Economies”) at locally affordable prices to improve access to such Products in Developing Countries.

f. Within thirty (30) days following the Effective Date, Columbia shall deliver to Company or have delivered to the Company (i) complete and accurate copies of the Technical Information described on Exhibit B and (ii) the Materials listed on Exhibit B.

3. Reservation of Rights for Research Purposes; Freedom of Publication.

a. Columbia reserves the right to practice the Patents and use Materials, to the extent Patents and Materials are exclusively licensed hereunder, for non-commercial academic research and educational purposes in the Field and to permit other entities or individuals to practice and use such Patents and Materials for non-commercial academic research and educational purposes in the Field. Columbia shall obtain from all entities or individuals who are given permission to practice and use such Patents and Materials an agreement in writing to limit such use to non-commercial academic research and educational purposes. Nothing in this Agreement shall be interpreted to limit in any way the right of Columbia and its faculty or employees to practice and use such Patents and Materials for any purpose outside the Field or to license or permit such use outside the Field by third parties.

Company acknowledges that Columbia is dedicated to free scholarly exchange and to public dissemination of the results of its scholarly activities. Columbia and its faculty and employees shall have the right to publish, disseminate or otherwise disclose any information relating to its research activities, including Technical Information.

4. Fees, Royalties and Payment.

a. Importance of Technical Information and Materials. Company has requested, and Columbia has agreed, to grant certain rights to Technical Information and Materials. Company requires these rights in order to develop and commercialize the technology licensed hereunder. Because of the importance of Technical Information and Materials, Company has agreed to pay certain royalties to Columbia on Other Products, as specified below, even if it is not Covered By a Patent, in order to obtain rights to Technical Information and Materials. Company has agreed to these payments because of the commercial value of Technical Information and Materials, separate and distinct from the commercial value of the Patents. Company acknowledges that it would not have entered into this Agreement without receiving the

rights to the Technical Information and Materials specified in Section 2. Company further acknowledges that licenses to Technical Information, Materials, and each patent and application within the definition of Patents were separately available from a license to the Patents, and that for convenience and because of the preference of Company, the parties executed a combined license to the Patents, Technical Information, and Materials.

b. In consideration of the licenses granted under Section 2a of this Agreement, the Company shall pay to Columbia as follows:

(i) License Fee: A nonrefundable, non-recoverable and non-creditable license fee in the sum of \$200,000, payable upon execution of this Agreement;

(ii) Royalties:

(A) With respect to sales of Patent Products by Company, its Designees or their Affiliates or Sublicensees, in the Territory, a nonrefundable and non-recoverable royalty of:

Cumulative sales of Patent Products	Royalty on Net Sales
Portion of cumulative Net Sales less than \$300 million	4%
Portion of cumulative Net Sales between \$300 million and \$500 million	5%
Portion of cumulative Net Sales \$500 million and higher	6%

(B) With respect to sales of Other Products by Company, its Designees, Sublicensees or their Affiliates, in the Territory, a nonrefundable and non-recoverable royalty of:

Cumulative sales of Other Products	Royalty on Net Sales
Portion of cumulative Net Sales less than \$300 million	3%
Portion of cumulative Net Sales between \$300 million and \$500 million	4%
Portion of cumulative Net Sales \$500 million and higher	5%

(C) Notwithstanding the foregoing, within thirty (30) days following the First Commercial Sale, the Company shall pay to Columbia a prorated minimum royalty payment based on \$750,000, such that the numerator of such payment shall be \$750,000, and the denominator shall be 365 divided by the number of days remaining in the calendar year on the date on which the First Commercial Sale occurs. Within thirty (30) days following the first business day of each January thereafter, the Company shall pay to Columbia a nonrefundable and non-recoverable minimum royalty payment in the amount of \$1,250,000. Each such minimum royalty payment will be credited against earned royalties accrued during the same calendar year in which the minimum royalty payment is due and payable. To the extent minimum royalty payments exceed the earned royalties accrued during the same calendar year, this excess amount cannot be carried over to any other year, either to decrease the earned royalties due in that year or to decrease the minimum royalty payments due in that year.

(iii) Equity: Subject to the execution by Columbia and Company of a mutually agreed upon subscription agreement which shall be executed by the Parties within thirty (30) days of execution of this Agreement, Company shall issue to Columbia shares of common stock of Company equal to 10% of its outstanding equity interests in the Company on a fully-diluted basis (including all equity allocated to equity plans), as of the date of, and after giving effect to, such issuance (the "Columbia Equity"). Such percentage shall be maintained, and the Columbia Equity shall not be subject to dilution, until such time as the Company receives aggregate gross proceeds of \$9 million from the sale of equity securities (or debt securities convertible into equity) from third party investors (with such anti-dilution applicable only up to the amount of \$9 million), provided that debt securities convertible into equity will only be counted toward the \$9 million threshold at the time such debt securities actually convert into equity.

c. Company will pay Columbia an amount equal to the following percentages of all Sublicensing Revenue:

(i) if the respective sublicense was granted on or before the second anniversary of the Effective Date, 30% of Sublicensing Revenue; and

(ii) if the respective sublicense was granted following the second anniversary of the Effective Date, 20% of Sublicensing Revenue.

d. Development Milestone Payments: The following one-time nonrefundable, non-recoverable and non-creditable milestone payments shall be made by Company within thirty (30) calendar days of the initial achievement of the indicated milestone by Company or a Sublicensee or an Affiliate or Designee of the foregoing:

- (A) \$500,000 upon commencement of the New Clinical Trial;
- (B) \$1 million upon the completion of the New Clinical Trial as measured by the submission of final reports from all clinical sites;
- (C) \$1 million upon NDA or BLA submission with the U.S. FDA (or an equivalent application in a jurisdiction outside of the United States); and

- (D) \$3 million upon approval of the NDA or BLA by the FDA (or an equivalent approval in a jurisdiction outside of the United States) of a Product.

e. Duration of Product Royalties. Royalties shall be payable on a country-by-country and Product-by-Product basis until the later of (i) twenty (20) years after the first bona fide commercial sale of a Product in a country, (ii) the expiration of the last to expire Valid Claim covering a Product in a country or (iii) expiration of an exclusive legal right granted to Company, its Affiliates, its Designees or a Sublicensee by a Regulatory Authority in such country to market and sell the Product in such country (such term, as applicable, the “Royalty Term”).

f. Highest Royalty Due. If a Product is covered by both the definition of Patent Product and Other Product, Columbia shall be entitled to the Patent Product royalty rate on the Product. Columbia shall not be entitled to more than one royalty payment on the same Product sale under Section 4. To the extent a Product ceases being a Patent Product but is still an Other Product, Columbia shall be entitled to the Other Product royalty rate on the Product, but only for such time as specified in Section 4e. By way of example, but not by way of limitation, if the manufacture of a Product is Covered by the claim of a Patent, and the manufacture of that Product also incorporates in part Technical Information, Company must pay the royalty specified in Section 4b(ii)(A). If, after some period of time (for example, five years) of paying the royalties specified in Section 4b(ii)(A) on the Product, the Product ceases to be a Patent Product, Company must continue to pay royalties on the Product pursuant to Section 4b(ii)(B) for the duration specified in Section 4e measured from the first bona fide commercial sale of the Patent Product on a country-by-country and product-by-product basis.

g. No Non-Monetary Consideration. Without Columbia’s prior written consent, Company, Sublicensees, and Affiliates or Designees of the foregoing, shall not solicit or accept any consideration for the sale of any Product other than as will be accurately reflected in Net Sales. Furthermore, Company shall not enter into any transaction with any Affiliate, Designee or Sublicensee that would constitute a bad faith circumvention of its monetary or other obligations under this Agreement.

h. Royalty Stacking. In the event that it is necessary or essential for the Company, Sublicensee or an Affiliate or Designee of the foregoing to enter into a royalty-bearing license with a Third Party in order to manufacture, use, commercialize or develop a Product in any country of the Territory, then Company shall be entitled to deduct fifty percent (50%) of the royalties paid to any such Third Party for any such rights in a particular country (such consideration, “Third Party Royalties”) from any payments due Columbia under Section 4(b)(ii) of this Agreement, provided that such amounts payable to Columbia shall not be reduced, with respect to any Calendar Quarter, below ninety percent (90%) of the amounts otherwise due Columbia with respect to such calendar quarter without such offset. To the extent any offsets for a calendar quarter exceed the earned royalties accrued during the same calendar quarter, this excess amount cannot be carried over to any other calendar quarter, either to decrease the earned royalties due in that calendar quarter or to decrease the minimum royalty payments due in that calendar quarter or any future calendar quarter.

i. If Company (or any entity or person acting on its behalf and at its instruction) initiates any Challenge, all royalty rates, minimum royalties, and other payment rates set forth in Sections 4b(ii) and 4c shall be automatically doubled on and after the date of such challenge for the remaining term of this Agreement.

(i) Company shall pay all costs and expenses incurred by Columbia (including actual attorneys' fees) in connection with defending a Challenge. Columbia may bill Company on a quarterly basis with respect to such costs and expenses, and Company shall make payment within thirty (30) days after receiving an invoice from Columbia.

(ii) In the event at least one claim of a Patent that is subject to a Challenge survives the Challenge by not being found invalid or unenforceable, regardless of whether the claim is amended as part of the Challenge, all royalty rates, minimum royalties, and other payment rates set forth in Sections 4b(ii) and 4c shall be automatically trebled on and after the date of such finding for the remaining term of this Agreement.

Company acknowledges and agrees that the provisions set forth in this Section 4i reasonably reflect the value derived from the Agreement by Company in the event of a Challenge. In addition, Company acknowledges and agrees that any payments made under this Section 4i shall be nonrefundable and non-recoverable for any reason whatsoever.

j. Sale Below Fair Market Value. In the event that Company, Sublicensees, or the Affiliates or Designees of the foregoing sell Product to a Third Party in a transaction that is not at arm's-length, the price for Licensed Product shall not be established such that Net Sales is below fair market value with the intent of increasing market share for other products sold by Company, Sublicensees, or their Affiliates or Designees to such Third Party or for the purpose of reducing the amount of royalties payable on the Net Sales of Product. If the sale of Product under such circumstances results in Net Sales below the fair market value of Product sold in an arm's-length transaction, then the Net Sales of Product in such transaction shall be deemed to be the fair market value of Product sold in an arm's-length transaction for purposes of calculating payments owed to Columbia under this Agreement.

k. Taxes. All amounts due hereunder exclude all applicable sales, use, and other taxes and duties, and Fortress shall be responsible for payment of all such taxes (other than taxes based on Columbia's income) and duties and any related penalties and interest, arising from the payment of amounts due under this Agreement. The Parties agree to cooperate with one another and use commercially reasonable efforts to avoid or reduce tax withholding or similar obligations in respect of royalties, payments in the nature of royalties, milestone payments, and other payments made by Company to Columbia under this Agreement. To the extent Company is required to withhold taxes on any payment to Columbia, Company shall pay the amounts of such taxes to the proper governmental authority in a timely manner and promptly transmit to Columbia official receipts issued by the appropriate taxing authority and/or an official tax certificate, or such other evidence as Columbia may reasonably request, to establish that such taxes have been paid. Columbia shall provide Company any tax forms that may be reasonably necessary in order for Company to not withhold tax or to withhold tax at a reduced rate under an applicable bilateral income tax treaty. Columbia shall use commercially reasonable efforts to provide any such tax forms to Company at least 45 days before the due date for any payment for which Columbia desires that Company apply a reduced withholding rate. Each Party shall

provide the others with reasonable assistance to enable the recovery, as permitted by applicable law, of withholding taxes, value added taxes, or similar obligations resulting from payments made under this Agreement, such recovery to be for the benefit of the Party bearing such withholding tax or value added tax. Columbia shall indemnify and hold Company harmless from and against any penalties, interest or other tax liability arising from any failure by Fortress (at the express written request of Columbia) to withhold or by reduction (at the express written request of Columbia) in its withholding.

5. Reports and Payments.

Within forty-five (45) days after the first business day of each calendar quarter of each License Year of this Agreement following the First Commercial Sale, Company shall submit to Columbia a written report with respect to the preceding calendar quarter (the "Payment Report") stating:

(i) Gross and Net Sales of Products by Company, Sublicensees, Designees and their Affiliates during such quarter, together with detailed information sufficient to permit Columbia to verify the accuracy of reported Net Sales, including Product names, country where manufactured, country where sold, actual selling price, units sold, an identification of all Patent claims that any Patent Product is Covered By, and an identification of Materials and Technical Information used or incorporated in the discovery, development, manufacture, use, sale, offering for sale, importation, exportation, distribution, rental or lease of any Other Product;

(ii) Amounts accruing to, and amounts received by, Company from its Sublicensees during such quarter together with the respective payment reports received by Company from any Sublicensees;

(iii) A calculation under Section 4 of the amounts due to Columbia, making reference to the applicable subsection thereof; and

(iv) The exact date of the first commercial sale of a Product shall be reported in the first Payment Report for such Product.

a. Simultaneously with the submission of each Payment Report, Company shall make payments to Columbia of the amounts due for the calendar quarter covered by the Payment Report. Payment shall be by check payable to The Trustees of Columbia University in the City of New York and sent to the following address:

The Trustees of Columbia University in the City of New York
Columbia Technology Ventures
P.O. Box 1394
New York, NY 10008-1394

or to such other address as Columbia may specify by notice hereunder, or if requested by Columbia, by wire transfer of immediately available funds by Company to:

Wells Fargo

375 Park Avenue, 6th Floor

MAC J0127-063

New York, NY 10152

(This is the bank's address, not Columbia University's.

Do not use this address for correspondence to Columbia University.)

Routing #: 121000248

Swift #: WFBIUS6S

Columbia Account #: 2000039431790

Beneficiary: Columbia University FBO Tech Ventures, Finance

Other identifying info: include invoice #, contract #

or to such other bank and account identified by notice to Company by Columbia. Company is required to send the quarterly royalty statement whether or not royalty payments are due.

b. Within thirty (30) days after the date of termination or expiration of this Agreement, Company shall pay Columbia any and all amounts that are due pursuant to this Agreement as of the date of such termination or expiration, together with a Payment Report for such payment in accordance with Section 5a hereof, except that such Payment Report shall cover the period from the end of the last calendar quarter prior to termination or expiration to the date of termination or expiration. Nothing in the foregoing shall be deemed to satisfy any of Company's other obligations under this Agreement upon termination or expiration.

c. Minimum royalty payments are payable in accordance with Section 4.b.ii.C.

d. With respect to revenues obtained by Company in foreign countries, Company shall make royalty payments to Columbia in the United States in United States Dollars. Royalty payments for transactions outside the United States shall first be determined in the currency of the country in which they are earned, and then converted to United States dollars using the buying rates of exchange quoted by The Wall Street Journal (or its successor) in New York, New York for the last business day of the calendar quarter in which the royalties were earned. Any and all loss of exchange value, taxes, or other expenses incurred in the transfer or conversion of foreign currency into U.S. dollars, and any income, remittance, or other taxes on such royalties required to be withheld at the source shall be the exclusive responsibility of Company, and shall not be used to decrease the amount of royalties due to Columbia. Royalty statements shall show sales both in the local currency and US dollars, with the exchange rate used clearly stated.

e. Company shall maintain at its principal office usual books of account and records showing its actions under this Agreement, and sufficient to determine Company's compliance with its obligations hereunder. Upon reasonable notice, but not more than once per calendar year, Columbia may have a certified public accountant or auditor, and an attorney (each as to whom Company has no reasonable objection) inspect such books and records for purposes of verifying the accuracy of the amounts paid under this Agreement. Prior to any such inspection, such accountant or auditor shall enter into a reasonably confidential disclosure agreement with Company. Such certified public accountant and accountant shall not disclose to Columbia any information other than information reasonably relating to the accuracy of

payments made under this Agreement, and all such information shall, notwithstanding anything herein to the contrary, be deemed Confidential Information of Company. The review may cover a period of not more than five (5) years before the first day of the calendar quarter in which the review is requested. In the event that the accountant or auditor concludes that Company has underpaid royalties by five percent (5%) or more with respect to any calendar quarter, or if such underpayment is in excess of \$5,000.00 for any calendar quarter, or an aggregate of \$10,000 for any calendar year, Company shall pay, within ten days after demand by Columbia, the reasonable, documented out-of-pocket costs and expenses of such review (including the fees charged by Columbia's accountant and attorney involved in the inspection), in addition to amount of any underpayment and any interest thereon. Company agrees to reasonably cooperate with Columbia's accountant or auditor and attorney in connection with any such inspection. During the review, Company shall provide Columbia's accountant or auditor and attorney with all information Columbia reasonably requests to allow the accountant or auditor or attorney to audit and test for completeness including without limitation, information relating to sales, inventory, manufacturing, purchasing, transfer records, invoices, purchase orders, sales orders, shipping documentation, third-party royalty reports, cost information, pricing policies, and agreements with third parties (including Sublicensees, Designees, Affiliates of Company, and Sublicensees, and customers).

f. Notwithstanding anything to the contrary in this Agreement, and without limiting any of Columbia's rights and remedies hereunder, any payment required hereunder that is made late (including unpaid portions of amounts due) shall bear interest, compounded monthly, at the rate of 9% per annum, or in Columbia's sole discretion, at the U.S. prime rate plus 3% as published by the Wall Street Journal on the last day of the applicable billing period. Any interest charged or paid in excess of the maximum rate permitted by applicable New York State Law shall be deemed the result of a mistake and interest paid in excess of the maximum rate shall be credited or refunded (at the Company's option) to Company.

g. Company shall reimburse Columbia for any costs and expenses incurred in connection with engaging any collection agency for the purpose of collecting on any arrears of Company with respect to its payment and reimbursement obligations under this Agreement.

h. For each year following the year in which the First Commercial Sale occurs, Company shall submit to Columbia annual non-binding forecasts on or before the thirtieth day following January 1 for annual sales of Products by Company, Sublicensees, Designees and their Affiliates to Columbia for its internal budget purposes.

6. Diligence.

a. Company shall use its commercially reasonable efforts to research, discover, develop and market Products for commercial sale and distribution in the Territory, and to such end, such efforts will include commercially reasonable clinical development of the Product, including commercially reasonable research and development, manufacturing, laboratory and clinical testing of Products. Columbia agrees that the efforts of Sublicensees, Affiliates, Designees, and Third Party contractors shall be deemed the acts of Company for purposes of satisfying this Section 6a. No less often than every six (6) months after the Effective Date, Company shall report in writing to Columbia on progress made toward the diligence

objectives set forth above.

Company and Columbia will negotiate in good faith diligence milestones by the earlier to occur of (i) May 31, 2017 and (ii) within 60 (sixty) days following receipt by the Parties from the U.S. Food and Drug Administration of the minutes of a Type C Meeting regarding development of a Product, and the Parties will execute an amendment to this Agreement to incorporate such Diligence Milestones into this Agreement, which shall be executed within thirty (30) days of the occurrence of such event. The Diligence Milestones will reflect commercially reasonable biotechnology and pharmaceutical industry standards with respect to manufacturing, pre-clinical development, clinical development and regulatory submission and review. Such Diligence Milestones may be adjusted from time to time by written agreement of both Parties to reflect changes to such Diligence Milestones based on actual product development outcomes. Acceptance of the milestones will be in Columbia's reasonable discretion.

b. Notwithstanding any other provisions of this Agreement, upon a material breach of Section 6a by Company, followed by written notice by Columbia of such breach and a forty-five (45) day period to cure (with Company not having cured such breach during such period), Columbia shall have the option of terminating all of the licenses granted under Section 2 in accordance with Section 16 of this Agreement, or converting any or all of such exclusive licenses to non-exclusive licenses with no right to sublicense and no right to initiate legal proceedings pursuant to Section 11.

c. As soon as practicable after the Effective Date, Columbia shall endeavor to provide to Company a draft agreement or agreements governing studies to be performed by Columbia or a third party regarding preclinical imaging and or clinical imaging using radiolabeled Chimeric Fibril-Reactive Monoclonal Antibody 11-1F4 antibody to detect and measure amyloid deposits formed from immunoglobulin light chains (AL Amyloid) (the "Sponsored Research Agreement"), to be executed within thirty (30) days following receipt by Company of such draft from Columbia. Company shall provide all funding reasonably expected to be necessary for completion of the research conducted under the Sponsored Research Agreement; provided, however, that in no event shall Company's payment obligations under the Sponsored Research Agreement exceed \$500,000. The Sponsored Research Agreement shall provide, unless otherwise agreed by the Parties in writing, that half of the research funding shall be provided upon execution of the Sponsored Research Agreement, one-fourth of the research funding shall be provided six (6) months thereafter and the balance shall be due and payable upon submission of the final report by Columbia.

7. Confidentiality.

a. Confidential Information. "Confidential Information" means all non-public, confidential, or proprietary information disclosed before, on or after the Effective Date, by either Party (a "Disclosing Party") to the other Party (a "Recipient") or its Designees and Affiliates, or to any of such Recipient's or its Designees' and Affiliates' employees, officers, directors, partners, shareholders, agents, attorneys, accountants, or advisors (collectively, "Representatives"). The terms and conditions of this Agreement are considered Confidential

Information of both Parties.

b. Exclusions from Confidential Information. Except as required by applicable federal, state, or local law or regulation, the term "Confidential Information" of a Disclosing Party, as used in this Agreement, shall not include information that:

- (i) at the time of disclosure is, or thereafter becomes, generally available to and known by the public other than as a result of, directly or indirectly, any violation of this Agreement by the Recipient or any of its Representatives;
- (ii) at the time of disclosure is, or thereafter becomes, available to the Recipient on a non-confidential basis from a Third Party, provided that such Third Party is not and was not prohibited from disclosing such Confidential Information to the Recipient by a legal, fiduciary or contractual obligation to the Disclosing Party;
- (iii) was, through no wrongdoing, known by or in the possession of the Recipient or its Representatives, as established by documentary evidence, before being disclosed by or on behalf of the Disclosing Party pursuant to this Agreement;
- (iv) is approved for release by prior written authorization of the Disclosing Party; or
- (v) was or is independently developed by the Recipient, as established by documentary evidence, without reference to or use of, in whole or in part, any of the Disclosing Party's Confidential Information.

c. Recipient Obligations. The Recipient shall:

(i) protect and safeguard the confidentiality of all such Confidential Information with at least the same degree of care as the Recipient would protect its own Confidential Information, but in no event with less than a commercially reasonable degree of care;

(ii) not use the Disclosing Party's Confidential Information, or permit it to be accessed or used, for any purpose other than the purpose of this Agreement or otherwise in any manner to the Disclosing Party's detriment;

(iii) not disclose any such Confidential Information to any person or entity, except to the Recipient's Representatives who:

A. need to know the Confidential Information to assist the Recipient, or act on its behalf, in relation to the purpose of this Agreement or to exercise its rights under the Agreement;

B. are informed by the Recipient of the confidential nature of the Confidential Information; and

C. are subject to confidentiality duties or obligations to the

Recipient that are no less restrictive than the terms and conditions of this Agreement.

(iv) be responsible for any breach of this Agreement caused by any of its Representatives.

d. Required Disclosure. Any disclosure by the Recipient, any of its Affiliates, or its or its Affiliates' Representatives of any of the Disclosing Party's Confidential Information pursuant to applicable federal, state or local law, regulation or a valid order issued by a court or governmental agency of competent jurisdiction (a "Legal Order") shall be subject to the terms of this Section. Before making any such disclosure, the Recipient shall provide the Disclosing Party with: (i) to the extent reasonably practicable, prompt written notice of such requirement so that the Disclosing Party may seek, at its sole cost and expense, a protective order or other remedy, and (ii) reasonable assistance, at the Disclosing Party's sole cost and expense, in opposing such disclosure or seeking a protective order or other limitations on disclosure. If, after providing such notice and assistance as required herein, the Recipient remains subject to a Legal Order to disclose any of Disclosing Party's Confidential Information, the Recipient (or its Affiliates, its Designees, its or their Representatives, or other persons to whom such Legal Order is directed) shall disclose no more than that portion of the Confidential Information which, on the advice of the Recipient's legal counsel, such Legal Order specifically requires the Recipient to disclose. The details of that advice shall be confidential and privileged at the sole discretion of Recipient.

e. Specific Permitted Uses and Disclosure. Notwithstanding the foregoing, Company and its Affiliates, Designees, and Sublicensees may (i) use Columbia's Confidential Information as necessary or useful to discover, develop, manufacture, obtain approval for, commercialize, use, sell, have sold, distribute, rent or lease Products and (ii) disclose Columbia's Confidential Information to investors, prospective investors, employees, consultants, contractors, prospective Sublicensees, agents, collaborators, prospective collaborators and other third parties if each such recipient is bound by confidentiality obligations at least as protective of Columbia's Confidential Information as those provided in this Section 7.

f. Term of Confidentiality. Confidential Information shall remain subject to the terms of this Section 7 for a period of five (5) years after the expiration or termination of this Agreement.

8. Disclaimer of Warranty; Limitations of Liability.

a. Columbia hereby represents and warrants that (i) as of the Effective Date, it has not entered into any agreement granting any rights under the Patents or the Technical Information to any Third Parties, (ii) all listed inventors of the Patents as of the Effective Date have assigned all of their right, title and interest in the Patents to Columbia, and (iii) to the best of the knowledge of the officers of Columbia's office of Columbia Technology Ventures and the Office of the General Counsel, neither the execution of this Agreement nor the performance of its obligations hereunder will constitute a breach of the terms and provisions of any other

agreement to which Columbia is a party.

b. EXCEPT AS SET FORTH IN SECTION 8a, COLUMBIA IS LICENSING THE PATENTS, MATERIALS, TECHNICAL INFORMATION, AND THE SUBJECT OF ANY OTHER LICENSE HEREUNDER, ON AN “AS IS” BASIS. COLUMBIA MAKES NO WARRANTIES EITHER EXPRESS OR IMPLIED OF ANY KIND, AND HEREBY EXPRESSLY DISCLAIMS ANY WARRANTIES, REPRESENTATIONS OR GUARANTEES OF ANY KIND AS TO THE PATENTS, MATERIALS, TECHNICAL INFORMATION, PRODUCTS AND/OR ANYTHING DISCOVERED, DEVELOPED, MANUFACTURED, USED, SOLD, OFFERED FOR SALE, IMPORTED, EXPORTED, DISTRIBUTED, RENTED, LEASED OR OTHERWISE DISPOSED OF UNDER ANY LICENSE GRANTED HEREUNDER, INCLUDING BUT NOT LIMITED TO: ANY WARRANTIES OF MERCHANTABILITY, TITLE, FITNESS, ADEQUACY OR SUITABILITY FOR A PARTICULAR PURPOSE, USE OR RESULT; ANY WARRANTIES AS TO THE VALIDITY OF ANY PATENT; AND ANY WARRANTIES OF FREEDOM FROM INFRINGEMENT OF ANY DOMESTIC OR FOREIGN PATENTS, COPYRIGHTS, TRADE SECRETS OR OTHER PROPRIETARY RIGHTS OF ANY PARTY.

c. In no event shall Columbia, or its trustees, officers, faculty members, students, employees and agents, have any liability to Company, Sublicensees, Designees, or Affiliates of the foregoing, or any Third Party arising out of the use, operation or application of the Patents, Technical Information, Materials, Products, or anything discovered, developed, manufactured, used, sold, offered for sale, imported, exported, distributed, rented, leased or otherwise disposed of under any license granted hereunder by Company, Sublicensees, Designees or Affiliates of the foregoing, or any Third Party for any reason, including but not limited to, the unmerchantability, inadequacy or unsuitability of the Patents, Materials, Technical Information, Products and/or anything discovered, developed, manufactured, used, sold, offered for sale, imported, exported, distributed, rented, leased or otherwise disposed of under any license granted hereunder for any particular purpose or to produce any particular result, or for any latent defects therein.

d. In no event will Columbia, or its trustees, officers, faculty members, students, employees and agents, be liable to the Company, Sublicensees, Designees or Affiliates of the foregoing, or any Third Party, for any consequential, incidental, special or indirect damages (including, but not limited to, from any destruction to property or from any loss of use, revenue, profit, time or good will) based on activity arising out of or related to this Agreement, whether pursuant to a claim of breach of contract or any other claim of any type. In no event will Company, its Affiliates, Sublicensees and their officers, directors, employees, contractors and agents, be liable to Columbia, or its trustees, officers, faculty members, students, employees and agents, or any Third Party, for any consequential, incidental, special or indirect damages (including, but not limited to, from any destruction to property or from any loss of use, revenue, profit, time or good will) based on activity arising out of or related to this Agreement, whether pursuant to a claim of breach of contract or any other claim of any type

e. In no event shall Columbia’s liability to Company exceed the payments made to Columbia by Company under this Agreement.

f. The parties hereto acknowledge that the limitations and exclusions of

liability and disclaimers of warranty set forth in this Agreement form an essential basis of the bargain between the parties.

9. Prohibition Against Use of Name.

Company will not use the name, insignia, or symbols of Columbia, its faculties or departments, or any variation or combination thereof, for any purpose whatsoever without Columbia's prior written consent. Columbia will not use the name, logo, trademarks, insignia, or symbols of Company, or any variation or combination thereof, for any purpose whatsoever without Company's prior written consent.

10. Compliance with Governmental Obligations.

a. Notwithstanding any provision in this Agreement, Columbia disclaims any obligation or liability arising under the license provisions of this Agreement if Company or its Affiliates is charged in a governmental action for not complying with or fails to comply with governmental regulations in the course of taking steps to bring any Product to a point of practical application.

b. Company shall comply upon reasonable notice from Columbia with all governmental requests relating directly to Company's exercise of its rights under this License Agreement directed to either Columbia or Company and provide all information and assistance reasonably necessary to comply with such governmental requests.

c. Company shall ensure that research, development, manufacturing and marketing under this Agreement complies with all government regulations in force and effect including, but not limited to, Federal, state, and municipal legislation.

11. Patent Prosecution and Maintenance; Litigation.

a. Columbia, by counsel it selects to whom Company has no reasonable objection, in consultation with Company and any counsel appointed by the Company, will prepare, file, prosecute and maintain all Patents in Columbia's name and in countries designated by the Company. Columbia shall instruct its patent counsel (1) to copy Company on all correspondence related to Patents (including copies of each patent application, office action, response to office action, request for terminal disclaimer, and request for reissue or reexamination of any patent or patent application) as well as copies of all proposed responses to such correspondence in time for Company to review and comment on such response, (2) consult with Company, and reasonably consider Company's comments and suggestions regarding matters relating to securing and maintaining the Patents, and (3) as requested by Company, to provide an update as to the current status of all Patents. The parties agree that consultation between the parties relating to the Patents under this Section 11 shall be pursuant to a common interest in the validity, enforceability and scope of the Patents. Each party shall treat such consultation, along with any information disclosed by each party in connection therewith

(including any information concerning patent expenses), on a strictly confidential basis, and shall not disclose such consultation or information to any party without the other party's prior written consent. If Company seeks to challenge the validity, enforceability or scope of any Patent, Columbia's consultation obligation under this Section 11a shall automatically terminate; for the avoidance of doubt, any such termination shall not affect Company's confidentiality and nondisclosure obligations with respect to consultation or disclosure of information prior to such termination, and shall not affect any other provisions of this Agreement (including Company's reimbursement obligation under Section 11b).

b. Company will reimburse Columbia for the actual fees, costs, and expenses Columbia has incurred prior to the Effective Date and will pay the actual reasonable, documented fees, costs, and expenses that Columbia incurs following ~~the Effective Date~~ in the Effective Date preparing, filing, prosecuting and maintaining the Patents, including without limitation, reasonable and documented attorneys' fees, the costs of any interference proceedings, oppositions, reexaminations, or any other ex parte or inter partes administrative proceeding before patent offices, taxes, annuities, issue fees, working fees, maintenance fees and renewal charges (collectively "Patent Expenses"). Columbia, using reasonable efforts, estimates that patent expenses incurred through October 31, 2016 under Section 11a in connection with the Patents set forth in Exhibit A are \$2,774.00, and shall be reimbursed in full by Company to Columbia within five (5) business days after the Effective Date. Patent Expenses incurred by Columbia after October 31, 2016 shall be reimbursed to Columbia by Company within fourteen (14) days of receiving Columbia's invoice. Patent Expenses incurred by Columbia after the date hereof shall be reimbursed to Columbia by Company within thirty (30) days of receiving Columbia's invoice. If Company decides that it does not wish to pay for the preparation, filing, prosecution, protection or maintenance of any Patents in a particular country ("Abandoned Patent Rights"), Company shall provide Columbia with prompt written notice of such election. Upon receipt of such notice by Columbia, Company shall be released from its obligation to reimburse Columbia for the expenses incurred thereafter as to such Abandoned Patent Rights. Any license granted by Columbia to Company hereunder with respect to Abandoned Patent Rights will terminate.

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OH 1/1/17

c. With respect to non-US and non-PCT Patent Expenses, Columbia will send to Company a brief description of anticipated actions by country or region and the associated expense in advance ("Patent Expense Estimate"). Within the later of 2 months prior to the action due dates or 30 days of Company receipt of the Patent Expense Estimate, Company may elect actions that it wishes Columbia to take with respect to the non-US and non-PCT patent applications ("Elected Actions") and shall ensure that Columbia receives payment of the reasonable future Patent Expenses for such Elected Actions. Failure by Company to make the payment for an Elected Action will be considered an election not to secure the rights associated with the specific action, and Columbia may abandon the Patents or in the event Columbia notifies Company that Columbia will continue to prosecute such Patents at its expense ("Returned Patents"), Company will have no further rights to such Returned Patents, effective immediately upon Company receipt of Columbia's notification to Company. Any payment overage paid by Company under this Section 11c will be applied to future Patent Expenses. Upon Company request, any payment overage not used for future Patent Expenses within 12 months will be returned to the Company promptly. Any expenses in excess of the Patent

Expense estimate will be invoiced to the Company.

d. However, at Columbia's election, Columbia may require advance payment of a reasonable estimate of future Patent Expenses for US and PCT filings within the scope of the Patents, and Columbia may require the Company to make such payment up to three months prior to the date Columbia has chosen for the legal work to be completed. In any event, Columbia will give at least 30 days' notice to the Company prior to the date the advance payment is due. Any unused balance, if any, will be credited towards future Patent Expenses, or upon Company's written request, returned to the Company. Within thirty (30) days of receiving an invoice from Columbia for any Patent Expenses incurred in excess of the reasonable estimate, Company shall reimburse Columbia for such excess amount. Subject to Sections 15 and Section 16(c), upon failure of Company to pay Patenting Expenses for any Patent(s) as required by Section 11a through Section 11d, Columbia may in its sole discretion either (i) abandon any said Patent(s), (ii) convert the license for such Patent(s) to non-exclusive, or (iii) terminate the license to such Patent(s) and will be free to grant a license in the Field in the Territory under such Patent(s) to any other person on any terms. In such event, Columbia will provide notice of abandonment or termination or conversion of such license rights to Company.

e. In the event either party becomes aware of any possible or actual infringement of any Patents, that party shall promptly notify the other party and provide it with details regarding such infringement. Notwithstanding anything to the contrary herein, Company will have the first right, at its expense, to initiate a suit or take other appropriate action that it believes is reasonably required to protect (i.e., prevent or abate actual or threatened infringement or misappropriation of) or otherwise enforce the Patents, including defending against any counterclaims or cross-claims brought by any party against Company or Columbia regarding the Patents. Before commencing any such suit, Company shall consult with Columbia concerning the advisability of bringing suit, the selection of counsel and the jurisdiction for such action and shall use reasonable efforts to accommodate the views of Columbia regarding the proposed action. If a court determines that Columbia is a necessary or essential party to the action, Columbia shall join as a party to the suit at Company's expense. Upon Company's request and at Company's expense, Columbia shall provide reasonable assistance to Company in connection with an action brought under this Section. Any proposed disposition or settlement of a legal proceeding filed by Company pursuant to this Section 11e to enforce any issued patent falling within the definition of Patents against any Third-Party Infringer shall be subject to Columbia's prior written approval, which approval shall not be unreasonably withheld or delayed. If Company fails to initiate a suit or take other appropriate action within ninety (90) days after becoming aware of the basis for such suit or action, then Columbia may, in its discretion, provide Company with written notice of Columbia's intent to initiate a suit or take other appropriate action with respect to such infringement or misappropriation of the Patents; provided that prior to initiating any such suit, Columbia shall consult with Company concerning the advisability of bringing suit, the selection of counsel and the jurisdiction for such action, and shall use reasonable efforts to accommodate the views of Company regarding the proposed action. If Columbia brings such suit, upon Columbia's request, Company shall provide reasonable assistance to Columbia in connection therewith and Columbia shall be responsible to Company for all reasonable out-of-pocket costs and expenses. Notwithstanding the foregoing, Company's rights under this Section 11e shall apply only to claims of Patents that are exclusively licensed to

Company under this Agreement and only in the Field and Territory that are exclusively licensed to Company under this Agreement.

f. Any recovery, whether by way of settlement or judgment, from a third party pursuant to a legal proceeding initiated in accordance with Section 11e shall first be used to reimburse the party initiating such legal proceeding for its actual fees, costs and expenses incurred in connection with such proceeding and then be used to reimburse the party not initiating such legal proceeding for its actual fees, costs and expenses incurred in connection with such proceeding. Any remaining amounts from any such settlement or judgment shall be divided as follows: (A) the portion thereof attributable to “lost sales” shall be retained by the Company and deemed to be Net Sales, and Company shall pay to Columbia a royalty on such Net Sales as set forth in Section 4b(ii); and (B) the portion not attributable to lost sales (including any punitive or exemplary damages) shall be divided 75% to the party who initiated or carried on the proceedings and 25% to the other party.

g. In the event a party initiates or defends a legal proceeding concerning any Patent pursuant to Section 11, the other party shall cooperate fully with and supply all assistance reasonably requested by the party initiating such proceeding, at the initiating party’s expense. The party that institutes any legal proceeding concerning any Patent pursuant to Section 11 shall have sole control of that proceeding.

12. Indemnity and Insurance.

a. Company will indemnify, defend, and hold harmless Columbia, its trustees, officers, faculty, employees, students and agents (collectively, “Indemnitees”), from and against any and all actions, suits, claims, demands, prosecutions, liabilities, costs, expenses, damages, deficiencies, losses or obligations (including attorneys’ fees) due to any claim by a Third Party (“Claim”) based on or arising out of (i) the discovery, development, manufacture, packaging, use, sale, offering for sale, importation, exportation, distribution, rental or lease of Products by or on behalf of Company, its Affiliates, Designees and Sublicensees, (ii) the use of Patents, Materials or Technical Information by Company, Sublicensees, Designees, or their Affiliates, (iii) any representation made or warranty given by Company, Sublicensees, Designees, or their Affiliates with respect to Products, Patents, Materials or Technical Information, (iv) any infringement claims relating to Products, Patents, Materials or Technical Information, and (v) any asserted violation of the Export Laws (as defined in Section 14 hereof) by Company, Sublicensees, Designees, or their Affiliates. Notwithstanding the foregoing, Company shall have no obligations under this Section 12.a. with respect to Claims directly arising out of (i) Indemnitee’s gross negligence or willful misconduct or (ii) Columbia’s breach of Section 8.a.

b. Company’s indemnification obligations under the preceding paragraph are conditioned upon (i) Columbia notifying Company of any Claim hereunder as soon as reasonably practicable after it receives notice of the Claim; provided that the failure so to notify Company will relieve Company from liability for indemnification only if and to the extent such failure results in additional costs, expenses or liability, (ii) Columbia and the Indemnitees permitting Company to assume direction and control of the defense of the Claim (including the right to settle the Claim); provided, however, that Company shall not settle any Claim without

the prior written consent of Columbia, such consent not to be unreasonably withheld, where such settlement (a) would include any admission of liability or wrongdoing on the part of any Indemnitee or (b) would impose any restriction on any Indemnitee's conduct of any of its activities or (c) would affect the scope, validity or enforceability of any Patent and (iii) the Indemnitees shall cooperate as reasonably requested (at the expense of Company) in the investigation and defense of any Claim, and may not settle a Claim without the express written consent of Company.

c. Beginning at least ten (10) business days before the time any Product is being marketed or commercially distributed or sold (other than for the purpose of obtaining regulatory approvals) by Company, or by an Affiliate, Designee or Sublicensee, Company shall, at its sole cost and expense, procure and maintain, during the term of this Agreement, commercial general liability insurance (including product liability and contractual liability insurance applicable to Company's indemnity obligations under Section 12a) with reputable and financially secure insurance carriers reasonably acceptable to Columbia to cover the activities of Company, Sublicensees, Designees, and their Affiliates, with minimum limits of \$5,000,000 combined single limit for bodily injury and property damage per occurrence and in the aggregate. During clinical trials of any Product, Company shall, at its sole cost and expense, procure and maintain commercial general liability insurance in such equal or lesser amount as is customary. Such insurance shall include Columbia, its trustees, faculty, officers, employees and agents as additional insureds. Company shall furnish a certificate of insurance evidencing such coverage, with thirty days' written notice to Columbia of cancellation or material change in coverage. The minimum amounts of insurance coverage required herein shall not be construed as creating any limitation on the Company's indemnity obligation under Section 12a of this Agreement.

c. Company's insurance shall be primary coverage; any insurance Columbia may purchase shall be excess and noncontributory. The Company's insurance shall be written to cover claims incurred, discovered, manifested, or made during or after the expiration of this Agreement.

d. Company shall at all times comply with all statutory workers' compensation and employers' liability requirements covering its employees with respect to activities performed under this Agreement.

13. Marking.

Prior to the issuance of patents falling within the definition of Patents, and to the extent required under applicable laws, Company shall mark all Patent Products (or their containers) made, sold, offered for sale, imported, or otherwise disposed of by Company under the license granted in this Agreement with the words "Patent Pending," and following the issuance of one or more patents, with the numbers of such patents. The Company shall cause its Affiliates, to comply with the marking requirements of this Section 13 and shall contractually require its Sublicensees, Designees and their Affiliates to comply with such requirements.

14. Export Control Laws.

Company agrees to comply with U.S. export laws and regulations pertaining to the export of technical data, services and commodities, including the International Traffic in

Arms Regulations (22 C.F.R. § 120 et seq.), the Export Administration Regulations (15 C.F.R. § 730 et seq.), the regulations administered by the Treasury Department's Office of Foreign Assets Control (31 C.F.R. § 500, et seq.), and the Anti-Boycott Regulations (15 C.F.R. § 760). The parties shall cooperate with each other to facilitate compliance with these laws and regulations.

Company understands that sharing controlled technical data with non-U.S. persons is an export to that person's country of citizenship that is subject to U.S. export laws and regulations, even if the transfer occurs in the United States. Company shall obtain any necessary U.S. government license or other authorization required pursuant to the U.S. export control laws and regulations for the export or re-export of any commodity, service or technical data covered by this Agreement, including technical data acquired from Columbia pursuant to this Agreement and products created as a result of that data.

15. Breach and Cure.

a. In addition to applicable legal standards, Company shall be deemed to be in material breach of this Agreement for: (i) failure to pay fully and promptly amounts due pursuant to Section 4 (including without limitation, the minimum royalties under subsection b(ii)(C) thereof and any payments required under subsection (i) thereof) and payable pursuant to Section 5; or (ii) failure of Company to use commercially reasonable efforts to meet any of its obligations under Sections 6.a or 6.b of this Agreement; and (iii) failure to comply with governmental requests directed to Columbia or Company pursuant to Section 10b; (iv) failure to reimburse Columbia for or pay fully and promptly the costs of prosecuting and maintaining Patents pursuant to Section 11; (v) failure to obtain and maintain insurance in the amount and of the type provided for in Section 12; (vi) failure to comply with the Export Laws under Section 14; and (vii) failure to timely provide the funding under the Sponsored Research Agreement. Upon such a material breach, Columbia shall have the rights set forth in Section 16(c) below.

16. Term of Agreement.

a. This Agreement shall be effective as of the Effective Date and shall continue in full force and effect until its expiration or termination in accordance with this Section 16.

b. Unless terminated earlier under any provision of this Agreement, the term of this Agreement shall commence on the Effective Date and, unless earlier terminated as provided in this Section 16 shall continue in full force and effect, on a country-by-country and Product-by-Product basis, until the until the Royalty Term in such country with respect to such Product expires, at which time this Agreement shall expire in its entirety with respect to such Product in such country. Upon expiration of the Royalty Term for a particular country and Product, Company, its Affiliates, and Sublicensees shall, notwithstanding anything herein to the contrary, have and are hereby granted a perpetual, irrevocable, fully-paid, royalty-free, transferable, sublicenseable right and license under the Technical Information and Materials to make, use, sell, offer for sale, and import such Product in such country.

c. If either party materially breaches this Agreement at any time, the non-breaching party shall have the right to terminate this Agreement by written notice to the breaching party, if such material breach is not cured within forty-five (45) calendar days following notice by the non-breaching party to the breaching party specifying the material breach.

d. Columbia may terminate this Agreement upon notice to Company if Company becomes insolvent, is adjudged bankrupt, applies for judicial or extra-judicial settlement with its creditors, makes an assignment for the benefit of its creditors, voluntarily files for bankruptcy or has a receiver or trustee (or the like) in bankruptcy appointed by reason of its insolvency, or in the event an involuntary bankruptcy action is filed against Company and not dismissed within ninety (90) days, or if Company becomes the subject of liquidation or dissolution proceedings.

e. Company, in its sole discretion, shall have the right to terminate, for its convenience, this Agreement in its entirety or on a Product-by-Product and country-by-country basis, upon sixty (60) days prior written notice, provided that Company is not making, using, selling, importing or exporting Products in such country(ies).

f. Notwithstanding anything to the contrary herein, upon termination of this Agreement prior to its expiration, (i) in the event that any IND for a Product is filed by the Company or assigned to the Company, Company will assign such IND to Columbia or to any Third Party designated by Columbia, (ii) all rights granted under the Patents, Materials and Technical Information granted to Company shall automatically revert to Columbia, and (iii) any sublicenses granted by Company or any Affiliate thereof under the Patents, Technical Information and Materials shall, to the extent provided in the sublicense agreement, remain in effect and be assigned to and assumed by, Columbia, provided that: (i) if rights to intellectual property or property other than the Patents, Technical Information and Materials are licensed to the Sublicensee under such sublicense, such assignment and assumption shall be partial and limited to the Patents, Technical Information and Materials, (ii) Columbia shall not assume any obligations under such sublicense in excess of its obligations hereunder, and (iii) the Sublicensee shall thereafter pay Columbia any consideration that would have been due to Columbia hereunder with respect to the rights granted to such Sublicensee under the Patents, Technical Information and Materials in such sublicense (in lieu of the payment obligations set forth in such sublicense).

g. Sections 4i, 5b, 5e, 5f, 5g, 7, 8, 9, 10, 12, 14, 16f, 16g, 16h, 16i, 16j, 17, 19, 22, 23, and 25 will survive any termination or expiration of this Agreement.

h. Any termination of this Agreement shall not adversely affect any rights or obligations that may have accrued to either party prior to the date of termination, including without limitation, Company's obligation to pay all amounts due and payable under Sections 4 (including the minimum royalties accrued under subsection b(ii)(C) thereof and any payments required under subsection i thereof), 5 and 11 hereof.

i. Upon any termination of this Agreement (but not expiration) for any reason other than termination by Columbia under Section 16.c or 16.d, Company, Sublicensees, Designees, and their Affiliates shall have the right, for one year or such longer period as the parties may reasonably agree, to dispose of Products or substantially completed Products then on hand, and to complete orders for Products then on hand, and royalties shall be paid to Columbia with respect to such Products as though this Agreement had not terminated.

j. Notwithstanding anything to the contrary in the Agreement, to the extent the manufacture of a Product is Covered By an issued patent within the definition of Patents and occurs prior to the expiration of such issued patent, the sale of that Product after the expiration

date of the issued patent shall still constitute a royalty-bearing sale under Section 4.

17. Notices. Any notice required or permitted to be given under this Agreement shall be sufficient if in writing and shall be considered given (i) when mailed by certified mail (return receipt requested), postage prepaid, or (ii) on the date of actual delivery by hand or overnight delivery, with receipt acknowledged,

if to Columbia, to:

Executive Director
Columbia Technology Ventures
Columbia University
80 Claremont Avenue, #4F, Mail Code 9606
New York, NY 10027-5712

copy to:

General Counsel
Columbia University
412 Low Memorial Library
535 West 116th Street, Mail Code 4308
New York, New York 10027

if to the Company, to:

Caelum Biosciences, Inc.
c/o Fortress Biotech, Inc.
Attn: Michael Spector
2 Gansevoort, 9th Floor
New York, NY 10014

or to such other address as a party may specify by notice hereunder.

18. Assignment. This Agreement and all rights and obligations hereunder may not be assigned by either party without the written consent of the other party. Notwithstanding the foregoing, each party shall be entitled, upon written notification to the other party but without the other party's prior written consent, to assign or transfer this Agreement: (a) in connection with the transfer or sale of all or substantially all of such party's assets or business or (b) in the event of such party's merger, consolidation, reorganization, change of control or similar transaction. Any permitted assignee of either party shall, as a condition to such assignment, assume all obligations of its assignor arising under this Agreement following such assignment. Any attempt to assign without compliance with this provision shall be void.

19. Waiver and Election of Remedies. The failure of any party to insist upon strict adherence to any term of this Agreement on any occasion shall not be considered a waiver or deprive that party thereafter of the right to insist upon strict adherence to that term or any other term of this Agreement. All waivers must be in writing and signed by an authorized representative of the party against which such waiver is being sought. The pursuit by either party of any remedy to which it is entitled at any time or continuation of the Agreement despite a breach by the other shall not be deemed an election of remedies or waiver of the right to pursue any other remedies to which it may be entitled.

20. Binding on Successors. This Agreement shall be binding upon and inure to the benefit of the parties and their respective successors and assigns to the extent assignment is permitted under this Agreement.

21. Independent Contractors. It is the express intention of the parties that the relationship of Columbia and the Company shall be that of independent contractors and shall not be that of agents, partners or joint venturers. Nothing in this Agreement is intended or shall be construed to permit or authorize either party to incur, or represent that it has the power to incur, any obligation or liability on behalf of the other party.

22. Entire Agreement; Amendment. This Agreement, together with the Exhibits, sets forth the entire agreement between the parties concerning the subject matter hereof and supersedes all previous agreements, written or oral, concerning such subject matter. This Agreement may be amended only by written agreement duly executed by the parties.

23. Severability. In the event that any provision of this Agreement is held by a court of competent jurisdiction to be unenforceable because it is invalid, illegal or unenforceable, the validity of the remaining provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular provisions held to be unenforceable, unless such construction would materially alter the meaning of this Agreement. By way of example, but not by way of limitation, Sections 4i(i) and 4i(ii) are intended by Company and Columbia to be severable from each other, such that if one clause is found to be unenforceable, the other clauses remain operative and in effect.

24. No Third-Party Beneficiaries. Except as expressly set forth herein, the parties hereto agree that there are no third-party beneficiaries of any kind to this Agreement.

25. Governing Law. This Agreement shall be governed by and construed in accordance with the internal substantive laws of the State of New York as applicable to agreements made and wholly performed within the State of New York, and without reference to the conflict or choice of laws principles of any jurisdiction. Unless otherwise separately agreed in writing, the parties agree that any and all claims arising under or related to this Agreement shall be heard and determined only in either the United States District Court for the Southern District of New York or in the courts of the State of New York located in the City and County of New York, and the parties irrevocably agree to submit themselves to the exclusive and personal jurisdiction of those courts and irrevocably waive any and all rights any such party may now or hereafter have to object to such jurisdiction or the convenience of the forum.

26. Execution in Counterparts; Facsimile or Electronic Transmission. This Agreement may be executed in counterparts, and by facsimile or electronic transmission. This Agreement is not binding on the parties until it has been signed below on behalf of each party.

[Signature page follows]

IN WITNESS WHEREOF, Columbia and the Company have caused this Agreement to be executed by their duly authorized representatives as of the day and year first written above.

**THE TRUSTEES OF COLUMBIA
UNIVERSITY IN THE CITY OF NEW YORK**

By  _____
Executive Director,
Columbia Technology Ventures

TTS#49756

CAELUM BIOSCIENCES, INC.

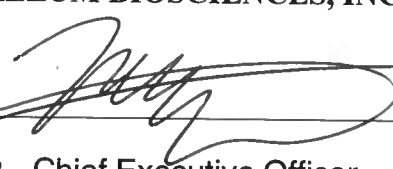
By  _____
Title Chief Executive Officer
Michael Spector

EXHIBIT A

Patent application to be filed

EXHIBIT B

MATERIALS AND TECHNICAL INFORMATION

1. Chimeric 11-1F4 (Ch-11-1F4) Antibody
2. Cell Clones utilized in production of Ch-11-1F4 antibody.
3. Investigational new drug application (IND) number 117,316 entitled, "Chimeric Monoclonal Antibody 11-1F4."
4. Clinical data for Phase 1a of the "Study of Chimeric Fibril-Reactive Monoclonal Antibody 11-1F4 in Patients with AL Amyloidosis" ClinicalTrials.gov identifier: NCT02245867 is complete and the final report is in preparation. Phase 1b of the "Study of Chimeric Fibril-Reactive Monoclonal Antibody 11-1F4 in Patients with AL Amyloidosis" Clinical Trials.gov identifier: NCT02245867 is in progress. PK data for Phase 1a and Phase 1b is not complete. Columbia intends to disclose the results upon completion of the studies and will amend Exhibit B at that time.
5. The CMC Report prepared by the NIH, entitled "Chemistry, Manufacturing and Control Information for CH11-1F4 Final Vialled Product."
 - a. CMC Report Appendix 1: Raw Material Table and Certificates of Analysis and Certificates of Origin for Raw Materials of Animal Origin Used in Manufacture of CH11-1F4 Final Vialled Product Lot L1210003.
 - b. CMC Report Appendix 2: AERES Biomedical Report entitled "Creation of Testing of a Master Seed Cell Bank of CHO(dhfr-) Cells (February 2003).
 - c. CMC Report Appendix 3: AERES Milestone 1 Report on the PCR Cloning and Sequencing of the Mouse 11-1F4 Antibody.
 - d. CMC Report Appendix 4: AERES Milestone 2 Report on the Construction, Cos Cell Expression, and Preliminary Binding Analysis of Chimeric Mouse-Human 11-1F4 Antibody, Expressed in COS Cells using the Light and Heavy Chain Expression Vectors pKN100 and PGID200 Respectively.
 - e. CMC Report Appendix 5: AERES Milestone 3 Report on the Generation of Three CHOdhfr- Cell Lines Stably Expressing the Chimeric 11-1F4 Antibody.
6. Columbia will use reasonable efforts to assist in the transfer and assignment of the orphan drug designation to the Company.